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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,923	10/04/2000	Kenneth G, DeRoche	K-1633	7253

7590 12/03/2001  
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EXAMINER

TSAL, HENRY

ART UNIT PAPER NUMBER

3722

DATE MAILED: 12/03/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/678,923

Applicant(s)

DEROCHE ET AL.

Examiner

Henry W.H. Tsai

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3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/4/00 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

*main*  
**Drawings**

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "26", "24", and "36". Correction is required.

**Claim Rejections - 35 USC § 102**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsujimura et al. (4,844,666).

Tsujimura et al. discloses the claimed invention comprising, as shown in Fig. 15, a tool body having an outer surface thereon and a central axis therein and including at least a first(including 24a) and second(including 24b) spiraling flute in the outer surface, each flute including a plurality of

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inserts(24a, 24b) secured therein to define an axial rake angle( $\alpha_1$ ,  $\alpha_4$ ), wherein the axial rake angle of an axial rake angle of the inserts varies between flutes and within each flute.

Note Tsujimura et al. also discloses the limitations described in claims 2-14, such as all of the inserts(24a, 24b) on the entire tool body being identical; the inserts each having a cutting edge and the cutting edges on inserts with differing axial rake angles have differing cutting edge lengths.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-6, and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujimura et al. in view of Dutschke et al. (5,425,603).

Tsujimura et al. discloses the claimed invention except for: the tool body including three spiraling flutes; the actual

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lengths of adjacent inserts in any flute circumferentially overlap.

Dutschke et al. discloses a cutting insert comprising the tool body including three spiraling flutes(18); the actual lengths of adjacent inserts in any flute circumferentially overlap as shown in Figs. 3a, 3b.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tsujimura et al.'s insert to comprise the tool body including three spiraling flutes; and the actual lengths of adjacent inserts in any flute circumferentially overlap, as taught by Dutschke et al., in order to simplify the structure, and to facilitate the cutting process, such as better guiding the chip flow in different machining conditions for the Tsujimura et al.'s tool.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

#### ***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (703) 308-7600. The examiner can

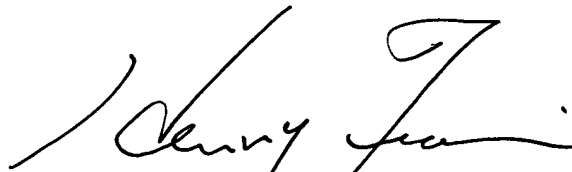
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normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, A. L. Wellington can be reached on (703) 308-2159. The fax number for TC 3700 is (703) 305-3579.

**Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 3700 receptionist whose telephone number is (703) 308-1148.**

8. In order to reduce pendency and avoid potential delays, Group 3700 is encouraging FAXing of responses to Office actions directly into the Group at (703)305-3579. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 3700 will be promptly forward to the examiner.



HENRY TSAI  
PRIMARY EXAMINER

November 8, 2001